

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer-implemented method for performing a data analysis process, the method comprising:

accessing an input identifying a data analysis process;

accessing user-defined data associated with the data analysis process, the user-defined data including sub-process indicators defining the data analysis process, each sub-process indicator identifying a sub-process associated with the data analysis process, wherein:

at least one identified sub-process is a deployment sub-process for storing, in electronic storage, a data attribute created in another one of the identified sub-processes, and

at least one identified sub-process is (1) an extraction sub-process for extracting data from a transactional data source, (2) a transformation sub-process for transforming data extracted from the transactional data source from a data format used by the transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source; and performing the sub-processes identified by the sub-process indicators included in the user-defined data,

wherein the user-defined data provides an indication identifying an order for performing the identified sub-processes, and performing the sub-processes comprises performing the sub-processes in the order identified by the user-defined data.

2. (Cancelled)

3. (Previously Presented) The method of claim 1 wherein performing the deployment sub-process to store the data attribute in electronic storage comprises performing the deployment sub-process to store the data attribute in one of a transactional data source, or an analytical data store used for analytical processing.

4. (Previously Presented) The method of claim 1 wherein one of the sub-process indicators is associated with a computer program that causes the indicated sub-process to be performed.

5. (Original) The method of claim 1 further comprising accessing meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the transactional data source, 2) a corresponding data element in the analytical process data source, or 3) both a corresponding data element in the transactional data source and a corresponding data element in the analytical process data source.

6. (Original) The method of claim 1 wherein each of the identified sub-processes are capable of sending messages that are sent using the same message format.

7. (Original) The method of claim 6 further comprising:

having one of the identified sub-processes send a message to another of the identified sub-processes; and

having the identified sub-process that receives the message perform a process in response to receiving the message.

8. (Original) The method of claim 1 further comprising:

accessing an indication defining how a particular error is to be processed during the data analysis process; and

when the particular error is detected during the data analysis process, processing the particular error based on the indication defining how the particular error is to be processed.

9. (Original) The method of claim 1 further comprising:

accessing an indication identifying a computing device or a component of a computing device to be used during the execution of one of the identified sub-processes; and
using the identified computing device or the component of the computing device during the execution of the one of the identified sub-processes based on the accessed indication.

10. (Cancelled)

11. (Original) The method of claim 1 further comprising:

accessing an indication identifying when the data analysis process is to be initiated; and
controlling initiation of the data analysis process such that the initiation is based on the accessed indication.

12. (Currently Amended) A computer program product tangibly embodied in a computer readable medium, the computer program product including instructions that, when executed, perform a data analysis process, and is configured to:

access an input identifying a data analysis process;

access user-defined data associated with the data analysis process, the user-defined data including sub-process indicators defining the data analysis process, each sub-process indicator identifying a sub-process associated with the data analysis process, wherein:

at least one identified sub-process is a deployment sub-process for storing, in electronic storage, a data attribute created in another one of the identified sub-processes, and

at least one identified sub-process is (1) an extraction sub-process for extracting data from a transactional data source, (2) a transformation sub-process for transforming data extracted from the transactional data source from a data format used by the transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical data source that is used for analytical

processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source; and
perform the sub-processes identified by the sub-process indicators included in the user-defined data,

wherein the user-defined data provides an indication identifying an order for performing the identified sub-processes, and the computer program product is configured to perform the sub-processes in the order identified by the user-defined data.

13. (Cancelled)

14. (Previously Presented) The computer program product of claim 12 wherein performing the deployment sub-process to store the data attribute in electronic storage comprises performing the deployment sub-process to store the data attribute in one of a transactional data source, an analytical data store used for analytical processing.

15. (Previously Presented) The computer program product of claim 12 wherein one of the sub-process indicators is associated with a computer program that causes the indicated sub-process to be performed.

16. (Original) The computer program product of claim 12 is further configured to access meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the transactional data source, 2) a corresponding data element in the analytical process data source, or 3) both a corresponding data element in the transactional data source and a corresponding data element in the analytical process data source.

17. (Original) The computer program product of claim 12 wherein each of the identified sub-processes are capable of sending messages that are sent using the same message format.

18. (Original) The computer program product of claim 17 is further configured to:

send a message from one of the identified sub-processes to another of the identified sub-processes; and

have the receiving sub-process perform a process in response to receiving the message.

19. (Original) The computer program product of claim 12 further configured to:
access an indication defining how a particular error is to be processed during the data analysis process; and

when the particular error is detected during the data analysis process, process the particular error based on the indication defining how the particular error is to be processed.

20. (Original) The computer program product of claim 12 further configured to:
access an indication identifying a computing device or a component of a computing device to be used during the execution of one of the identified sub-processes; and
use the identified computing device or the component of the computing device during the execution of the one of the identified sub-processes based on the accessed indication.

21. (Currently Amended) A system for performing a data analysis process, the system comprising a processor connected to a storage device and one or more input/output devices, wherein the processor is configured to:

access an input identifying a data analysis process;

access user-defined data associated with the data analysis process, the user-defined data including sub-process indicators defining the data analysis process, each sub-process indicator identifying a sub-process associated with the data analysis process, wherein:

at least one identified sub-process is a deployment sub-process for storing, in electronic storage, a data attribute created in another one of the identified sub-processes, and

at least one identified sub-process is (1) an extraction sub-process for extracting data from a transactional data source, (2) a transformation sub-process for transforming data extracted from the transactional data source from a data format used by the transactional data source to a data format used for analytical processing, (3) a loading

sub-process for loading data into an analytical data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source; and perform the sub-processes identified by the sub-process indicators included in the user-defined data,

wherein the user-defined data provides an indication identifying an order for performing the identified sub-processes, and the system is configured to perform the sub-processes in the order identified by the user-defined data.

22. (Previously Presented) The method of claim 1 wherein the sub-process indicators identify multiple sub-processes of the same type.

23. (Previously Presented) The method of claim 1 wherein the sub-process indicators comprise a first sub-process indicator that identifies a sub-process of a first type and a second sub-process indicator that identifies a sub-process of the first type.

24. (Previously Presented) The method of claim 23 further comprising:
accessing data identifying a first user-defined parameter for the first sub-process indicator; and
accessing data identifying a second user-defined parameter for the second sub-process indicator, the second user-defined parameter for the second sub-process indicator being different than the first user-defined parameter for the first sub-process indicator,
wherein performing the sub-processes comprises performing the sub-process of the first type identified by the first sub-process indicator in accordance with the first user-defined parameter and performing the sub-process of the first type identified by the second sub-process indicator in accordance with the second user-defined parameter.

25. (Previously Presented) The method of claim 1 further comprising:
accessing data identifying one or more user-defined parameters for each of the sub-process indicators,

wherein performing the sub-processes comprises performing the sub-processes in accordance with the accessed user-defined parameters.

26. (Previously Presented) The method of claim 10 wherein the user-defined data is first user-defined data, the first user-defined data including first sub-process indicators and providing an indication identifying a first order for performing the first sub-processes, the first order for performing the first sub-processes being different than a second order for performing the first sub-processes identified by second user-defined data including the first sub-process indicators.

27. (New) A computer-implemented method for performing a data analysis process, the method comprising:

- accessing an input identifying a data analysis process;

- accessing user-defined data defining the data analysis process, the user-defined data being based on user input provided by a user using a graphical user interface and including:

 - sub-process indicators that correspond to graphical icons added to the graphical user interface based on user input and that identify sub-processes defining the data analysis process,

 - order data that corresponds to graphical connections between the graphical icons added to the graphical user interface based on user input and that identifies an order for performing the sub-processes identified by the sub-process indicators when performing the data analysis process,

 - at least one database indicator that is selected, based on user input, from among a list of available databases and that identifies at least one database used in at least one sub-process included in the data analysis process, and

 - at least one meta-data attribute that is selected, based on user input, from among a list of available meta-data attributes and that identifies at least one meta-data attribute used in at least one sub-process included in the data analysis process;

- for each of the sub-process indicators, identifying a computer program that corresponds to the sub-process indicator and that is configured to perform the sub-process identified by the sub-process indicator;

configuring at least one of the identified computer programs to use the at least one database identified by the at least one database indicator;

configuring at least one of the identified computer programs to use the at least one meta-data attribute selected based on user input;

performing the data analysis process by executing each of the identified computer programs, including the at least one configured computer program, in an order that is based on the order for performing the sub-processes identified by the order data; and

storing results of the data analysis process.

28. (New) The method of claim 27 wherein the sub-process indicators include:

a deployment sub-process indicator identifying a deployment sub-process for storing, in electronic storage, a data attribute created in another one of the identified sub-processes,

an extraction sub-process indicator identifying an extraction sub-process for extracting data from a transactional data source,

a transformation sub-process indicator identifying a transformation sub-process for transforming data extracted from the transactional data source from a data format used by the transactional data source to a data format used for analytical processing,

a load sub-process indicator identifying a loading sub-process for loading data into an analytical data source that is used for analytical processing, and

a data mining sub-process indicator identifying a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source.